Vibrator Control Type RS1K

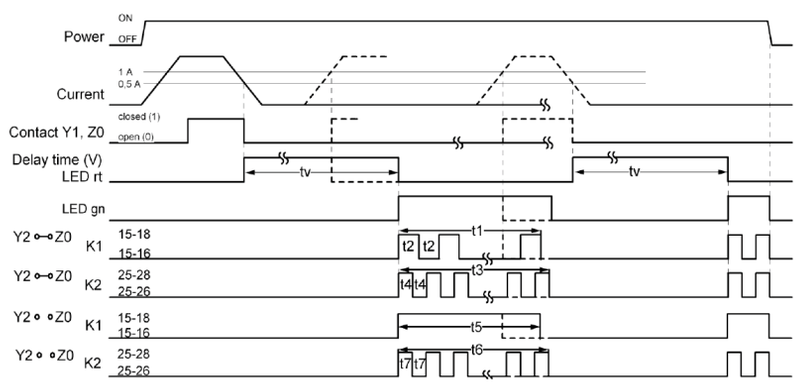
RS1K

Part number: **Z227800**

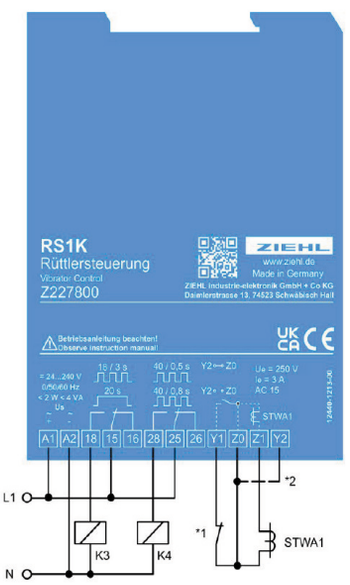
The vibrator control RS1K is a compact multiple time relay for triggering of vibrators in suction plants. In order to be able to operate suction plants at an optimum, the filters which get clogged by sawdust, chips or dust, have to be dedusted by vibration from time to time. The vibration action is by no means to be carried out the suction running or while slowing down the ventilator. If suctioning is started during vibration, the process is immediately to be interrupted. Prior to starting the vibration action, an adjustable deceleration time is running to delay the ventilator before start of vibration. This means that short stoppages can be by-passed without being obliged to carry out a vibration every time.

- Start of deceleration time by break contact at Y1/Z0 (e.g. from contactor suction motor)
- Starting of deceleration time through current transformer STWA 1 / STWA1H at Z0/Z1 (e.g. L1 from suction motor)
- adjustable deceleration time 1...30 min.
- Relay K1: continous vibration 20 s or impulse-vibration 18 s with 3 s clock
- Relay K2: impulse-vibration 40 s with clock 0.5 s or 0.8 s (for magnet valves)
- LED (red) signals deceleration time
- LED (green) signals vibration action
- automatic interruption of the vibration action when starting the suction process.

Function Chart:



tv: Delay time; t1 = 18 s; t2 = 3 s; t3 = 40 s; t4 = 0,5 s; t5 = 20 s; t6 = 40 s; t7 = 0,8 s



*1: Absaugung EIN
*2: Auswahl Rüttelfunktion

Technical Data

Control voltage U_S	AC/DC 24 - 270 V	0/50/60 Hz
Tolerance	AC 20 - 264 V; 45 - 62 Hz; DC 20,4 - 297 V	
Power consumption	< 4 VA	< 2 W
Inputs Z1-Z0		
Transformer connection	1x STWA1 or STWA1H	
Overload capacity	Max. 100A continuous, max. 300A for 10s	
Switch-on threshold	Ion ≥ AC 1 A	
Switch-off threshold	Ion ≤ AC 0,4 A	
Tolerance	± 20 %	
Inputs Y1-Z0, Y2-Z0		
Terminal voltage, -current	18 V; 3 mA	
Addition time	1 … 30 min (± 20%) adjustable	

Relay outputs, K1, K2	2x 1 changeover		
Switching voltage	max. AC 300V; DC 300V		
Minimum voltage/current	12 V 10 mA		
Conventional thermal current Ith	max. 5 A		
Current per terminal	max. 5 A		
Switching capacity (resistive load)	max. 1250 VA		
	max. 120 W at DC 24 V		
Operating category switching capacity	AC-15	Ie = 3 A	Ue = 250 V
	DC-13	Ie = 2 A	Ue = 24 V
	DC-13	Ie = 0,2 A	Ue = 240 V

Test condtions	EN 61010-1
Rated impulse withstand voltage	4000 V
Overvoltage category	III
Degree of pollution	2
Rated insulation voltage Ui	300 V
Duty cycle	100 %

EMC test	EN 61326-1 industrial environment
Interference emission	EN 61326-1; CISPR 11 Class B
Interference immunity	EN 61326-1
Fast transient interference variables (burst)	EN 61000-4-4 ±4,5 kV
	Pulse 5/50 ns, f = 5 kHz, t = 15 ms, T = 300 ms
High-energy surge voltages (surge)	IEC 61000-4-5 ±1 kV

Installation conditions	
Permissible ambient temperature	-20 °C ... +60 °C
Permissible storage temperature	-20 °C …+70 °C
Installation height	< 2000 m above sea level
Climate resistance	5 - 85% rel. humidity, no condensation
Permissible wiring temperature	-5 °C …+70 °C
Vibration resistance EN 60068-2-6	10…57 Hz ± 0,75 mm
	57…150 Hz 1g

Reliability - failure rate	EN 61709 / SN29500		
Ambient conditions	Local operation in dry rooms		
OPeration time 24/7/365	8760 h/a		
Failure rate (FIT)	Tu = 40 °C	Tu = 60 °C	Tu = 80 °C
Tu = Tref (component not in operation)	1181 FIT	2287 FIT	4681 FIT
	96 years	49 years	24 years

Connection type	Push-in spring-cage terminal
IP protection class terminals	IP20
Operation type	Push button
Number of levels	1
Conductor cross-section solid	1 x 0,14 mm² ... 1,5 mm² / AWG 28 ... 16
Conductor cross-section finely stranded	1 x 0,14 mm² ... 1,5 mm² / AWG 26 ... 14
Conductor cross-section ferrule with collar	1 x 0,25 mm² ... 0,75 mm²
Conductor cross-section ferrule without collar	1 x 0,25 mm² ... 1,5 mm²
Stripping length	8 ... 9 mm

Housing	Type K
Dimensions (W x H x D)	22.5 x 75 x 115 mm
Width	1 TE
IP protection class housing	IP40
IK protection class housing	IK06 (1 J impact energy)
Fastening	Snap-on mounting on mounting rail 35 mm to EN 60715 or screw fixing M 4
Installation position	any
Weight	approx. 120 g

Subject to technical changes